

TRANSCRIPT

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SESSION 3: HOW U.S. PUBLIC ATTITUDES AND POLICIES INTENDED TO PREVENT EBOLA IN THE UNITED STATES IMPACT AFFECTED COMMUNITIES

DR. GUTMANN: Welcome, everybody. Welcome back. This is our third panel for the day and the first two panels were terrific and I'm sure this one will be as well.

And we are focusing this panel on how American attitudes and policies intended to prevent Ebola in the United States impact affected communities. And to set the stage for this important discussion, we have comments from our first speaker, Oretha Bestman-Yates, and then as we have in the past, we will—I will introduce each speaker who will speak, and then we'll take questions and comments and have a dialogue afterwards.

Ms. Bestman-Yates was born and raised in Liberia and emigrated to the United States in 1987. She's the first female president of the Staten Island Liberian Community Association which is a not-for-profit organization representing approximately 10,000 Liberians, one of the largest concentrations of Africans in the United States.

Ms. Bestman-Yates serves on the boards of many not-for-profit organizations and works with different international advocacy groups, fostering and engaging in peace building, health promotion, advocacy for women and children, outreach and capacity building, and serving underprivileged communities. For example, she works with the elderly in her community, helped establish an African market on Staten Island, and runs a food pantry that feeds more than 3,000 people a month.

Ms. Bestman-Yates is currently working with survivors of the Ebola virus such as shipping food to Liberia with fellow community members. She continues to work with different cities and state government agencies to help educate citizens about the Ebola virus and

prevention. Clearly, something that intersects very importantly with the work of our Commission.

Thank you very much for being with us.

MS. BESTMAN-YATES: Well, thank you for inviting me to this Commission, and it is a privilege actually to be here.

The Ebola virus hit us very hard, those of us that are in the diaspora as West Africans, more especially the Liberian community where people were stigmatized. And I mean, I was directly hit by this stigmatization that was going in the diaspora when it came to the Ebola virus where I even lost my job because I visited Liberia in July, and my six-year old son that was proud to be called Liberian American don't want to be identified that name Liberia.

And it's been tough on us after 14 years of civil war and people running all over the place and where most Liberians migrated to the United States during the civil war when the President George W. Bush then announced that they are restarting a program that brought more West Africans to America, more especially Liberians, during the civil crisis where now we have close to 10,000 Liberians on Staten Island.

So it's like the Ebola virus when it hit us, we were targeted by our neighbors. So I had to actually work with the Department of Health in New York to try to educate people. It was like as you on the ferry or the train, people pulled away from you because of your accent, that they were afraid of contracting virus from you.

And so I had to kind of like get in the street and try to tell people, no, this is not what it's like. You don't just contract a virus because the person has an African accent or because they are from that part of the country or of the world. So it kind of helped.

But I think the news media even make it worse on us when Dr. Brantly contracted the virus in Liberia and the young man we all heard about, Eric Duncan, in Texas came with the virus to the United States. That's when it got very tough on us, and we were kind of afraid that people would be kind assault you because I was in the street where a guy see me, yelling at me, "Take yourself back to Africa with your Ebola virus."

So we had to come out with a statement I think most of you seen in the news, about I'm an African, I'm not a virus. I'm a Liberian, and I'm not a virus. So those are the things we had to face, and thank God that the news media left it alone. It focused on something else, so we are now free from that stigmatization.

DR. GUTMANN: Thank you. I'm sure we will have questions and want to engage you more.

Next, we have Chernor Bah. Mr. Bah is a renowned youth advocate for global education, a girl champion, and former refugee from Sierra Leone. He is cofounder of A World at School, a leading digital mobilization and campaign organization for education.

He is the youth representation on the high-level steering committee for the United Nations Secretary General's Global Education First Initiative and was the founding chair of its youth advocacy group.

Mr. Bah founded and led the Children's Forum Network, Sierra Leone's children's parliament and was junior executive president for the United Nations Voice of Children radio project.

He recently cofounded the Sierra Leone Adolescent Girls Network, a coalition of organizations working to promote adolescent girls' right and welfare in the current Ebola epidemic.

He's worked with young people and other marginalized groups in Liberia, Lebanon,
Haiti, Ethiopia, the Philippines in other emergency and non-emergency settings, leading efforts
to strengthen their voices in development, political, and policy processes in a credible way.

In 2014, Mr. Bah received the Women's Refugee Commission's Voice of Courage award for his global efforts on behalf of girls and youth affected by the conflict.

Welcome, it's wonderful to have you with us.

MR. BAH: Thank you very much. It's an incredible honor to be here.

So I come to this with, in addition to what Oretha has just said, a perspective that when I was born and raised in Sierra Leone. During the war in Sierra Leone, I became a refugee in Guinea, and I worked for two years in Liberia. So I actually know all three of the countries for better or worse pretty good.

I wanted to direct my comments today just to tell you a little bit of a story about how I got involved particularly with Ebola epidemic because I was living here in the United States as a Sierra Leonean and of course, following the news and watching every day and hearing and just being terrified to get a phone call. Whenever your phone rings and you're just scared that my mom was going to say somebody I know is infected or somebody—so I was here with that in my head.

And I was doing all my other work around global education, so I got invited to speak and continue my advocacy work, and I had lined up a number of speaking engagements. I realized that as we got to October or September-October, many people started disinviting me because I was a Sierra Leonean.

And I had been very vocal about what was happening in the country, and in October, I decided that I was going to go to Sierra Leone.

Oretha just mentioned that she lost a job. I didn't lose my job, but it's fair to say that there were major issues around when I announced that I wanted to go my country to help because I felt at the time I was asking myself some basic questions, what was happening in the context and what was needed and what I had the skill set and the opportunities to contribute to what was happening.

A lot has been said today about the things that were needed, just social mobilization, community engagement, and that at its core, Ebola is not really only a medical emergency. It is actually a human poverty and an illiteracy crisis.

So that's about the back and forth and just as Dr. Brantly was publicly—when they brought him here in the United States, that's the exact week I went back to Sierra Leone. When I got to my country, certain things stood out for me that I just wanted to point out.

Number one is my friends, we all have gone to university in Sierra Leone, and I was talking to them. The big question that was occupying everybody's mind really was how did Ebola come here, why Ebola?

And I'll tell you what. Lawyers, doctors, they all thought—and this is not the uneducated—they all thought that Ebola was a result of some research malfunction somewhere. That was—and this was not only perpetrated again by people in the fringes, in the media; people who had respectable voices were saying this.

And this contributed very significantly. So there was almost an alternative information channel. Everybody's on WhatsApp these days, and there are WhatsApp channels. And I don't know where these people get these news channels, but I'll tell you what. They have Americans on Iranian media, on Chinese media who claim that this was some research that was gone bad, and they have collected some amazing anecdotes that you listen to. And also people in the far

right in the United States who claim that the U.S. had patented some drugs about Ebola and things like that.

This significantly affected just the discussion, and I know today we've already alluded to the fact that there was big concerns about just trust between and among the governments in all respective countries and the role of the West. They just want us all dead. Look at what is happening.

And so when you combine that with all the cancellation of flights, and I have to say as a Sierra Leonean, thank goodness the United States did not go as far as cancel all flights to these countries, but our other friends did at the United Kingdom, which is our closest friend and ally in Sierra Leone, canceled all our flights. And all our neighbors, South Africa, the biggest economy in our continent, still bans everybody that has a Liberian, Sierra Leonean, or Guinean passport from going into their country.

So that created a sense of, I think, not only isolation but a sense of kind of helplessness, and it allowed these conspiracy theories to basically fester, to basically be rooted. And it took so much time for the counter narratives to begin to take root.

And this is why, again, I think the importance of some creative technologies and importance of new forms of information, social mobilization was relevant.

When I was in Sierra Leone, I was able to secure passes, so as you know, because of the crisis, the governments, the response I met with the president. I asked him, I said, "Mr. President, what's your assessment of the situation?"

And he said to me that basically, Ebola caught us pants down. I mean, I'm sorry to say he might just have been saying that literally because the entire country had been swept away by this

wave of Ebola. They have canceled every alternative social safety net program in the country. If you are not directly dealing with Ebola, you were told your program had to shut down.

So this meant that people who had other diseases, for women and girls, people with fistula, they were all sent home. I met with people who were told that who used to be in centers that were sent home.

In October while I was there, 100 percent of reproductive health centers had been shut down. This was at the peak of it. So pregnant women were suffering.

And the worst part for me was not only communities that were—because look, I grew up in Sierra Leone, and I've talked about this often, it's not an economy where we—we don't have a savings economy. When I was a kid, we went to school. After school, we went to the markets. We sold. That's what you the returns is what you go. You buy something, and then you come home and cook.

Now, they shut down the entire country. They quarantine every community, and this has been going on, by the way, for many, many months now since May in Sierra Leone. And what that meant was no movement, no commerce, and so called—even though districts were quarantined, they had quarantine homes. So quarantine homes is because you've had an infected person within your community, within your house, so you're shut down for 21 days.

And those were the only homes that got a minimum care. So government provided some distributed items which basically lasted one week. The people that suffered the most, and I want to just highlight some of the marginalized communities, were the poorest of the poor who were caught up in the middle of all of this.

I met many, many communities that were desperate. Orphanages that had gone for months, had not received any care whatsoever. And girls. I talk and work a lot, and I'm now mobilizing actors in Sierra Leone to focus particularly on the effect of this on adolescent girls.

When I was in Sierra Leone, I met with the UN agencies and the partners on the ground. They told me when they mentioned gender in the joint response, people say it's a luxury. We're talking about Ebola. Why are you mentioning gender?

Nobody wanted to look at how it was affected particularly. We know that in these kind of settings in my country when there's economic depression, the burden of taking care of the family rests on the girl. So girls were forced, for example, they were pushed out to go to the street.

Schools had been shut down now for a whole academic year, so nobody's been going to school.

So these girls were not only forced to cater for their families, they were also now being pushed into marriage. And the cruel irony was Ebola made marriage cheaper and easier because government banned public meetings. You don't have to create any fanfare. You don't spend a lot of money to create a marriage.

So now if you have sex with a girl and because it's a problem, you basically have to then—you're forced to take of the girl, and you can take her into your home. So most of these girls have been taken now into homes, and they're now married to these men.

And incidences of FGM which we thought were the positive thing because of many people were being affected, we were told that actually what's going to happen since most of the women who perform the FGMs were the first people that died in the communities, in our tradition, when one woman dies, she has to be replaced by 10 girls. So right after the outbreak, what's going to happen is you're going to see a spike in the amount and the number of girls and women who get into this.

So I mean, I see I'm out of time, but the biggest takeaway for me from when I left Freetown and I just came back again a couple of weeks ago. At the end of the day, if it's not Ebola, it could be cholera. It could be any of the things that we have talked about today.

It's a crisis of illiteracy. It's a crisis of trust. It's a crisis of poverty. It's poor people even in Sierra Leone in a poor community in a poor society, it's the poor people who are disproportionately affected by the virus. It's in the poorest of the poor community, and the elite for the most part are not being affected by it.

So I know that you guys think about ethical concerns and think about what priorities should be. I just wanted to throw those out as initial thoughts, and I hope those were useful thoughts.

Thank you very much for having me again.

DR. GUTMANN: Very useful. Thank you very much.

Our next speaker is Dr. Seema Yasmin. Dr. Yasmin is a medical doctor, epidemiologist, and journalist. She's staff writer at the Dallas Morning News, a professor of public health at the University of Texas at Dallas, and a contributor for CNN, MSNBC, and Al Jazeera America.

Dr. Yasmin has served as an officer in the Epidemic Intelligence Service at CDC where she investigated epidemics in maximum security prisons, American Indian reservations and health care facilities.

Her research interests focus on disparities in health and epidemic preparedness and response. Dr. Yasmin's work has appeared in peer reviewed medical journals and in the popular press, including as far ranging I should say, as the Huffington Post and Scientific American.

Welcome, Dr. Yasmin.

DR. YASMIN: Thank you for having me. I'm very humbled to be in such erudite company. So I'm here in my capacity as a physician, as a professor of public health, and as a journalist, and I've been asked to share some of the challenges faced by journalists who are trying to effectively and quickly communicate public health messages at a time of great public panic.

And as you mentioned, I was an officer in the Epidemic Intelligence Service at the CDC for a few years. My job then was to fight epidemics, to stop them from spreading. But last year I moved to Dallas, Texas, and I was taking up a new job at the Dallas Morning News at the University of Texas at Dallas, and a few weeks after I arrived in Dallas, Ebola arrived in Dallas.

DR. GUTMANN: Not cause and effect.

DR. YASMIN: Well, my colleagues kind of argued with me about that, but here we are again. I'm faced with another epidemic, and this time I'm fighting it from a different angle using slightly different tools. But there were considerable challenges to journalists who are trying to quickly get good information out there. So I wanted to share three of those main challenges with you.

The first is communicating scientific uncertainty. The second is the ubiquity of data, good data and bad data, and finally managing controversies in real time. How do you do that? How do you do that well?

So first, talking about communicating scientific uncertainty, we had to be honest, we had to put our hands up and say, "Look, there are some unknowns about this virus and this situation, right?" We've never seen Ebola virus disease propagate in this way for this long for this duration in this part of the world. So, sure, there are some very valid questions about viral evolution,

about mutations, about human-to-human transmission, even zoonotic transmission. We had to be honest about that.

And so what we learned at the Dallas Morning News is that we had to have very consistent messaging and very, very repetitive messaging. So if one day I was on CNN six times talking about Ebola, six times I had to say, this is how you can get Ebola, this is how you will not get Ebola. We could not overestimate how many times we'd have to repeat those messages.

And unfortunately, there was some inconsistency in the messaging about Ebola, sometimes from the media, sometimes from some public health agencies. There were shifting guidelines about what was the correct personal protective equipment to use, for example, really, really made the public anxious, I have to say.

And some of this was because it was a new situation. We were learning on the fly, and we were having to communicate quickly as we were doing so. So we learned as a traditional newspaper that we couldn't just write daily stories. That was not enough in this situation. The public was so anxious, our readers, our audience, they wanted more information.

And so we responded by doing things like Q&As and by doing live Twitter chats, where in real time, the public could ask us, will I get Ebola if I come to downtown Dallas? And we could say, no, the chances are tiny. And we'd get asked that question every day that we did a live Twitter chat. Again, had to just keep repeating those messages.

Second, the ubiquity of data, good and bad data. Well, there's a wealth of data online. So much of it is not in peer reviewed journals, but all of it is open to broad interpretation, and I guarantee you if there is one paper out there that leaves open the minute possibility of transmission of Ebola between two nonhuman primates in a lab that may have not been through direct transmission, the public will find that one paper, and then my phone will ring off the hook

at the newspaper to say, "Why aren't you talking about it? Why have I not read about this piece of research in the newspaper?"

So again, we had to make quick editorial decisions about what data do we include, and really importantly, what data do we exclude. We have to think about whether dedicating newspaper inches to debunking myths was useful, or did it just propagate the myth, did it just give them more attention. Such difficult decisions to make, especially when you're trying to make them very quickly.

Finally, managing controversies in real time. In the midst of so many Americans panicking about Ebola, some very eminent scientists chose to publicly share some hypotheses about Ebola, about how the virus may or may not mutate, about how it may or may not be transmitted.

And so we had to clarify that these are unproven, untested, even. hypotheses, that these are eminent, credible scientists, but they're doing what scientists have to do. They're keeping an open mind. They're putting these hypotheses out there, but let's be clear there's no evidence of a virus ever mutating to change its route of transmission. It's not happened.

So let's perhaps deal with the matters at hand and not what may remotely be possible and what perhaps we should do research on in the future. And in all of this, the media was sometimes as much a part of the problem as we were a part of the solution.

So here we are, we're in Dallas in a really important time in the city's history. People remember Dallas now for two things. One is the assassination of President John F. Kennedy, and the second is Ebola, the first case of Ebola diagnosed on home soil.

So it's an early morning in October, I'm jumping in my car, because I need to drive to the newsroom, my editors put me on deadline for two stories again, and my neighbor runs out and

says, "Thank you. Thank you so much for writing these stories. Thank you for what the Dallas Morning News is doing for putting this information out there." And then she says, "I'm so scared to go to downtown Dallas because I might get Ebola."

And so then I thought, okay, our biggest challenge might be that in the midst of a public health crisis, in the midst of this panic, we're trying to play catch up. We're suddenly trying to make the public health literate when you can't do that overnight. It's a process. It takes time. So thank you for allowing me to share those insights, and I look forward to continuing the discussion.

DR. GUTMANN: Thank you very much. Our next speaker for this panel is Kate Hurley, the clinical nurse manager of the ICU unit at St. Patrick Hospital in Missoula, Montana. At St. Patrick, Ms. Hurley is responsible for both the day-to-day management of the 24-bed, multispecialty ICU as well as long term strategic development for the unit.

In addition to her role in the ICU, she is responsible for the Care and Isolation Unit, a specialty unit within the ICU that was created in conjunction with the NIH to serve as a special isolation unit for employees and visitors to the Rocky Mountain Laboratory in Hamilton, Montana. Ms. Hurley spent three weeks in the summer of 2014 working with WHO at the Kenema Hospital in Sierra Leone providing direct patient care to patients with Ebola.

She also spent a week in the fall, 2014, with PAHO, teaching Cuban physicians and nurses about Ebola virus disease prior to their deployment to West Africa to work in Ebola treatment units. She's also been an adjunct assistant professor at the Montana State University College of Nursing teaching management and clinical courses in both the graduate and undergraduate programs.

Welcome.

MS. HURLEY: First of all, I'd like to thank you very much for inviting me to participate in this forum. I'm really honored to sit with this group of people. I had all my comments figured out until I went for a run on the Mall last night in the moonlight and I saw the Washington Monument, and I sort of changed it up. So it's not quite as polished as it was before.

But one of the things that hit me last night as I was returning from my run on the Mall is I ran by and I stopped in front of the American Red Cross. And what's interesting about that building is there's no signage. There's nothing there except the red cross, and that has been a symbol in our country for humanitarian assistance for decades and decades. And it's to that end that I really want to talk to you all today, is in a time of crisis I want to address what I learned working in Kenema about the Ebola virus.

I had the opportunity to deploy with them as you mentioned earlier for three weeks in Sierra Leone, and Trish and I talked before I sat down, and I think our experiences may be similar. But as a friend of mine once told me, it's better to hear something twice than not at all, so we may be saying similar things, but I got to go first, so there you go.

So during my time in Sierra Leone, I'd been a critical care nurse and worked in education for 25 years, and I feel like my foundation in health care is pretty darn stable, but there was nothing, nothing that prepared me for what I saw and what I did in Kenema. And I don't want to be overly dramatic, but as I go through this, there is a point at the end. The experience that I gained in Kenema is like none I've ever had before.

Physically, the biggest issue is acclimating to wearing PPE, personal protective equipment in 90 percent humidity and 95 degrees. It's much like running. When you stop running and you go for your first run, so difficult. Then the next run is easier and the third run is

easier, and then the fourth run you've kind of acclimated to it. And that's how it was working in the PPE.

The first day I could literally be in it for about an hour or an hour and a half before I could no longer function. But by about the third or fourth day, I could go in and I could work in the Kenema General Hospital for up to three and a half to four hours at a time. So I may go into I might have gone in three times, I might have gone in four times during a day to take care of patients.

So Kenema General Hospital is a little different than some of the Ebola treatment units you've heard about in that it was Kenema General Hospital, and they retrofitted three areas of the hospital and made it into an Ebola treatment unit. The issue that happened is that it was also the biggest hospital in that part of Sierra Leone, and so the rest of the hospital shut down, and it was just merely an Ebola treatment unit.

So one of the things I learned was how to use—wear PPE. The other thing that I truly learned in my three weeks there is I understand the progression of the disease. I understand the clinical manifestations. I know how to work in the protective gear, and I know what the treatment is, albeit in Kenema, very basic, but still fundamental to good outcomes in the patients we worked with.

And probably the most difficult aspect of working in Kenema was the emotional toll it took. And having worked in emergency departments, in critical care units for many years, I really sort of underscored the whole issue, but it was dramatic. It was absolutely dramatic. You care for these people day in and day out, hour after hour, day after day, and you get to know their personalities. You get to know what their passions are. You get to understand that they're families and that bond.

And so it's very difficult when you would come back every morning, and ten of those people you'd cared for the night before the night before were no longer there. So I can't underscore the emotional toll that it takes.

The human suffering and loss was at times just absolutely surreal. But the other thing that I just want to talk a little bit about, is that in the media one of the things I don't think we saw a lot of were survivors. And it was the survivors that propelled myself and the four other physicians with whom I worked to continue to go in every day. So there were moments of great joy when you would see children and families and they realized that they would get to go home and go back to their lives however fractured they were.

So I guess your question is: Why does this matter? Experience in this regard is incredibly important. Three weeks experience in an emergency department in the United States or a critical care unit is nothing. Three weeks experience in an Ebola treatment center in Kenema, Sierra Leone is huge. And so one of the things I do feel that I really garnered during this time was an inordinate amount of expertise with Ebola virus disease, mainly because there's not a lot of people out there with that experience.

So the Ebola crisis really needs experienced health care workers at the forefront, and I at this point in my career would consider myself to be an experienced health care worker in Ebola. Now am I going to go to West Africa again? Am I incredibly reticent about it? Absolutely. Absolutely. So just imagine this. I've come back from West Africa, I've integrated back into my job, I've gotten back in mid-September, and I get an email from the World Health Organization. And they say, "You're experienced in the treatment of this virus. Can you deploy not for three weeks, but can we deploy you for 10 days, and we absolutely promise we'll have you home for Christmas."

Another offer, for lack of a better word, comes through the PAHO to say, "Will you be part of our rapid response team? We have an outbreak in Central America. Can we mobilize you in three days? Can you leave for seven, and we'll have you home in ten?"

So you look at it economically, okay, can you leave your job for another ten days? Sure. You look at it socially. Can you leave your teenage children at home? Well, maybe. But you decide that probably socially and economically, that you could probably leave for ten days. So you're ready to make the decision, and then you know what flashes in the back of your head? Twenty one days. Twenty one days. And so as a consequence, both of those situations I declined—not based on economic or social issues, but based on the lack of clarity in what happens to someone when they come back after they've been in that situation.

So the only other point that I really kind of want to try to drive home is that I think the Ebola crisis in this country was truly a crisis of public perception, and I often say to colleagues with whom I work that your perception is your reality. And sure, my reality is different because my frame of reference is very different, but I think it is just so important, as you pointed out, that we be the purveyors of that information, we be the purveyors of all of that to a public that's incredibly panicked or was panicked. And I think that's all I have to say. Thank you.

DR. GUTMANN: Thank you. That's a lot. Thank you very much. Our last speaker for this panel before we open it up for questions and dialogue is Dr. Patricia Henwood, who is the director of the Global Health Initiatives in the Department of Emergency Medicine at the Hospital of the University of Pennsylvania.

And Dr. Henwood is also an assistant professor in the Perelman School of Medicine at Penn. She works clinically as an emergency physician with a focus on point-of-care ultrasound training and research in the emergency developing world and disaster context. Dr. Henwood

recently returned from her second Ebola-related mission in Liberia with the International Medial Corps, a United States based non-governmental organization with strong support from the Office of U.S. Foreign Assistance and USAID.

IMC is one of only a few organizations providing regional Ebola patient care and related training in the context of the current epidemic. She's also the cofounder of PURE, an organization dedicated to enhancing ultrasound use, training, and research in resource-limited settings, including Rwanda and Uganda.

Dr. Henwood serves as the President of PURE and has received numerous grants and awards for her research and training in this area. For example, while in Liberia, she sought out an ultrasound machine for Ebola patient care and found it a critical diagnostic aid. She's planning efforts towards diagnostic ultrasound capacity building in Liberia.

Dr. Henwood is also the current chair of the American College of Emergency Physicians' International Emergency Ultrasound Subcommittee and serves as an international advisor to the African Ultrasound Committee of the African Federation of Emergency Medicine.

Welcome.

DR. HENWOOD: Remember to turn on my mic. Again, I would like to reiterate it's an honor to really be here and speak with the Commission and all of these distinguished speakers. I will definitely be repeating some of the comments that Kate made, but hopefully that will reiterate that that's a collective experience that we've had.

So I'd like to focus my remarks on two key reasons why generalized quarantine and excessive restrictions on health care workers responding to the Ebola crisis are counterproductive. First, enacting policies and placing restrictions on returning health care

workers, which are neither scientifically informed, nor consistently implemented leads to misinformation. We should lead with the science and not the fear.

Second, these restrictions hinder recruitment and retention of health care workers to fight the epidemic at its source, ultimately making America more vulnerable to the spread of Ebola.

Last October and November, I served as a physician at one of International Medical Corps' four Ebola treatment units in the region. It was during the height of patient volumes at that Bong County Liberia site. It also coincided with significant media attention and increasing concerns about Ebola in America at the time, which led to evolving movement restrictions and quarantine.

As a returning health care worker last November, I complied with all policies, procedures, and restrictions in place at the time and again, as I returned from my most recent deployment. While I had no direct contact with any Ebola patient positives during my most recent mission, I was still restricted from activities in the public domain, which meant eating alone last night instead of at a restaurant, avoiding public transport, and having these clothes mailed to me instead of going to a store.

However, as of today, I am 22 days from direct patient care, and now deemed to be in a low risk category safe for congregate gatherings such as today's meeting. As you know, it's critically important to remember that while something like the current measles outbreak presents the challenge of containing an airborne virus, Ebola is not spread through the air.

DR. GUTMANN: Can you just repeat that?

DR. HENWOOD: Yes.

DR. GUTMANN: I think it's worth repeating it.

DR. HENWOOD: Yes. Ebola—

DR. GUTMANN: It's just the public records.

DR. HENWOOD: Yes, Ebola is not spread through the air. It can be spread only by coming in direct contact with symptomatic individuals, with their secretions, their blood, or bodily fluids. Clear messaging to the public on the real risks and policies in line with scientific fact would help quell unnecessary fear and stigma directed towards affected communities.

Those of us who have seen the faces of more than 100 Ebola patients presenting to our triage areas, who have quietly cried in our facemasks and goggles while holding the hand of a child as they take their last breath in the same treatment unit where their parents and siblings died one after the other over the last week, we know what Ebola looks like.

Those of us who have delivered stillborns in our units, who have pronounced at least one person dead for every survivor we discharged, we have seen the aching pain and distress caused by this virus. We are the most vigilant about safety and surveillance measures.

Responding health care workers risk their wellbeing to save lives and control the spread of Ebola and ultimately protect America by containing the virus at its source. Since the crisis began, following strict safety protocols, International Medical Corps is pleased to report that among our staff of more than 1,300, we have no infections. If any one of us were to develop symptoms, we are the most aware of the importance and efficacy of early treatment.

It's also important to remember that zero cases of Ebola have originated from a health care worker in the United States or Europe. Healthcare workers know the signs and symptoms all too well. We're not going to put America or loved ones at risk by delaying symptoms—by delaying care, and hiding symptoms. We actively monitor ourselves, sometimes too often.

There's a thermometer in my purse right now.

Quarantine, as defined by the CDC, is a separation of an asymptomatic individual reasonably believed to have been exposed to a quarantinable, communicable disease. Those of us who have properly adhered to extensive and decontamination protocols, who have worn appropriate personal protective equipment during any and all patient interactions, who have had no physical contact with anyone in a country where we were working, we are not reasonably believed to have been exposed to Ebola. Therefore, quarantine should not be applicable.

While active monitoring is reasonable, we need more guidance and consistency in the implementation of these policies locally. And nevertheless, putting returning health care workers in solitary confinement at the time when they most need support is unwarranted.

While there have been 10 cases of Ebola managed in the United States, there has never been an Ebola epidemic in the United States. Given the strength of our public health system and the quality of our health care, this is unlikely to ever be the case. There was, however, widespread fear in the U.S. as we've discussed. The lack of available and accurate information to the public contributed to this, and as a health care worker in West Africa at the time, we knew this was another epidemic we were going to need to manage when we got home.

Just as response efforts in West Africa were showing early signs of progress, unscientific quarantine policies and movement restrictions were put in place in America disrupting recruitment of essential and experienced humanitarian responders. While we worked alongside an incredibly dedicated team of local staff, at one point in November, I was one of two physicians working with three international nurses to supervise the care of more than 50 patients around the clock in our Ebola treatment unit.

This was compounded significantly by the need for extensive personal protective equipment and the intense heat and environmental conditions that we were dealing with.

Needless to say, the urgency for more help was clear. Once quarantine measures began in America, we watched the number of arrival airports we could clearly pass through dwindle, and we researched international locations that may be become the case as we thought our borders may end up functionally closed.

At times it felt more challenging to actually coordinate our return to the United States than to do our Ebola-related work in West Africa. Returning home means not only managing risk, but also managing the perception of risk on an hourly basis. Often touted as heroes when we're working in West Africa, at times we feel like pariahs when we get back to America. We attempt to navigate the vacillating and wide variety of local public health restrictions, interpretations of the words "prolonged periods," and the definition of a "congregate gathering," which may or may not include a grocery store or a restaurant depending on your locale.

Even though we are asymptomatic, many of us choose to see limited or no family during that 21-day period. This is not due to fear of making them sick, but rather public perceptions. We're concerned that our sibling, spouse, parent, or child will be sent home from work or from school because they had visited with us. In fact, that's why I returned to the United States the day after my large family's Thanksgiving celebration.

Last September, the CDC released its first models based on case data and doubling times in Liberia and Sierra Leone through August. Those indicated that if viral transmission were to continue without increased intervention, as of January 20, 2015, we would have been looking at 550,000 cases, or 1.4 million cases if corrected for underreporting. Those same models indicated that if intervention were scaled up such that 70 percent of patients were in treatment or isolation, if there were changes in community behaviors, as of January 20, we'd be looking at between

14,000 to 35,000 cases in quote-on-quote "an ending epidemic." This is where we are at the present time.

Per data from the World Health Organization, we stand at approximately 22,500 reported cases and nearly 9,000 deaths. We recently saw the first week in which we had less than 100 cases reported across the region since June. A more coordinated Ebola response effort was initiated, and we're seeing a vast improvement in the situation on the ground. But our job is not yet done. We must continue to work until there are no cases.

International Medical Corps quickly took the lead on a hot zone training program that has since trained more than 200 health care workers from 17 different agencies that are now working across West Africa. This includes the heroic men and women of the United States Public Health Service, who I would like to thank for their service and lifesaving treatment for health care workers in Liberia.

In addition to ongoing case management needs, the response is now focused on strengthening local health care systems, where a regional hospital of which I was just doing assessments during my last mission may have no ability for any chemistry testing, no culture testing, and one physician managing a hospital of more than 100 beds. In addition, we are working more closely with affected communities.

Let us take a moment to imagine if the global community had not become more involved in this intervention when we did, if the response effort had not been rapidly scaled up. We could be looking at the worst-case scenario right now, half a million to a million cases of Ebola.

Robust action from the international community made and is making a difference. The scale-up, which is finally helping us get source control of the Ebola epidemic, may have been severely hindered if quarantine measures were rolled out sooner or more broadly.

While we're encouraged by recent data, we know it's going to take ongoing vigilance and continued effort to end the epidemic and to get to zero cases. In conclusion, moving forward, I would strongly recommend clear, consistent, and scientifically informed policies for Ebola containment in the United States, such as monitoring without movement restrictions for asymptomatic individuals. The burden imposed by quarantines and unnecessarily restricted movements on health care workers without high risk exposures only serves to hamper our collective ability to control the epidemic at its source.

I'd like to thank you again for the opportunity to come speak with you guys today and really appreciate the examination of these important issues.

DR. GUTMANN: So the thanks is really ours to you before we have—
(Applause.)

DR. GUTMANN: I know there will be lots of questions and comments, and we'll begin with Christine Grady.

DR. GRADY: I just want to say I think you're all heroes, all of you, and I especially want to shout out to the nurse, because I am a nurse, and I think that's awesome.

DR. GUTMANN: I'll begin with a question because we were just chatting over our lunch break and said how important it is in what we communicate out to be very fact based and rational, but be passionate about this as well. So to be passionately rational and rationally passionate.

And that in some sense is what has been lacking here, and I want to ask either Oretha or Chernor how in this—connects what didn't go well—connects in your experience and mind with the need to ramp up in—before the next Ebola crisis, although there's still the need for good public health care in the three countries that are effected and beyond. Because when I read and

I'll just give you a rough order of magnitude. In the three affected countries, Liberia, Guinea, and Sierra Leone, the three that were most affected, roughly speaking, there's one doctor for every 10,000 people, which is one reason why the hospitals had to be cleared of everybody who wasn't affected by Ebola. There are just not enough health workers.

So what do you see the role of the United States and the international community in doing something for the better here, learning something important from Ebola? Open ended question as to what could we do, what could we learn, how can we make this a really constructive learning experience?

Oretha, would you like to begin?

MS. BESTMAN-YATES: First of all, I think one of the things we have that affected us the most in Liberia that I think need to be faced is the health care system, where I think most of the panelists here can tell you, some of the hospitals don't have running water, no electricity, and in those three countries, we lost like 20 percent of our health care workers to the Ebola virus.

People were left in the street, pregnant women were giving birth in the street because there was nowhere to put them where hospitals denied them services. And if we can strengthen the health care system in those countries, I think it would help. Like America, I don't think we prepared for the Ebola outbreak in Texas.

The Liberians did not know anything of Ebola. All we know is malaria and yellow fever and stuff. So if we can have a system set up where we can have a lab set up there where people can actually get tested for those viruses and also have the health care system built to serve the need, we should not wait for epidemic before we can start working on those.

MR. BAH: Thank you very much. I want to reiterate as well just that thank you for your work that you've done in my country, and you in Kenema, my father lives in Kenema. When I

was there in October, my father and I had constant fights when Ebola started. It was like you have to leave Kenema. He's like I have nowhere to go. It's like leave Kenema.

So when I went on October, I had to go into Kenema, and it was one of the most heartbreaking—connects to your question, because in Kenema, I visited the hospital, and my aunt was in nurse there. She had survived Ebola, and she told me about 39 of her colleagues had died. And keep in mind I mean these are nurses, lab workers, and things like that.

We had before Ebola about 150 to 200 doctors in Sierra Leone. About a third of them fled or stopped working. A good number of my friends just stopped working completely when the doctors started to die, especially when Dr. Khan passed away. And by the way, there are whole questions about what could have been done about Dr. Khan or whether enough has been done as well to protect those health workers. And then about 13 or 14 doctors in Sierra Leone died. And these are doctors.

What breaks my heart is that number we keep spreading, and we spread the news, and you just mentioned as a nurse as well, but we don't even know how many nurses have died in Sierra Leone, and that for me is part of the bigger tragedy, right? It's like they are the frontline workers, but that's less and less known. I think your point is apt. It's not the—as I said, it's not what I saw, it's not a response problem.

It's two things from my perspective. I visited the Ebola ward in Hastings, and I met a friend of mine I was in class with, a Sierra Leonean who was a military doctor. I said, "You're a hero." He said, "No, I'm not a hero." He said, "I was ordered to come to work here." But he was in the ward, and he was wearing his PPE and going in and out and coming out, going in and coming out, and all the nurses were scared.

This was in October. This was like peak period. And he said to me, "What we need is to make sure that they have more and more people like me here." The problem with Ebola is across the three countries, it's found the perfect host, 70 percent illiteracy among the adult population. That's the perfect host. It's an education problem. We don't have people who can support you. We don't have people who are educated enough to be part of that.

So I think to really create a system to connect that interconnectedness and to prevent crises like this, it's an investment in basic public health infrastructure. It works, and it's the difference between Sierra Leone and Liberia by the way. Yesterday we had 21 cases in Sierra Leone. They are withdrawing all the U.S. military in Liberia. I'm sorry to say, but it's because the U.S. military intervention in Liberia worked. You built beds, you had workers in there. In Sierra Leone, we're still a little behind, and that's still the problem.

DR. GUTMANN: It's important to hear what works. It really is. So thank you. Yes.

DR. YASMIN: May I just add that one another ethical issue for your consideration is a heavy recruitment of health care workers for our need from these parts of the world, to the NHS, the National Health Service in the UK where I work. The U.S. recruits heavily for nurses and physicians from Liberia, Sierra Leone, and Guinea, and in fact that recruitment has gone up in recent years leaving those countries lacking health care workers.

Sierra Leone, a population of six million has 10 surgeons, had 10 surgeons. Two of them died recently from Ebola. There are eight surgeons left, only one of them below the age of 60.

DR. GUTMANN: Nelson.

DR. MICHAEL: I wanted to ask you all about the impact of U.S. policies for quarantine in the affected community. That is the title of the section. And I can trace a pathway to

understand the first order impact, especially for people like you who had to deal with these issues in quarantine. Some of you I'm very familiar with because my agency takes a very conservative view on exposure and quarantine as you can imagine. But like your physician colleague, I take orders, too.

What is the second or maybe third order impact on the affected communities if nurses and physicians, other health care workers are not able to as freely get to the impacted areas? That has a very obvious impact in terms of being able to control disease, but what impact does it have on public trust? I mean what are the people that in Kenema or in Monrovia, what do they think about those policies?

Are there conspiracy theories that may influence at the end of the day the ability of developed countries to come in and test countermeasures like vaccines and therapies, where on the other hand, average Liberians and Sierra Leoneans, and Guineans are struggling with U.S. policies in terms of travel and quarantine?

DR. HENWOOD: To the continuity issue, so I think that's a huge problem. I was one of a few physicians that was able to go back actually, so it was obviously quite interesting to be working at the time when we had peak of patient volumes and then when we're actually trying to pivot, right, from case management to thinking where do we go from here.

And I was just actually speaking with the head of the DART team from OFDA, discussing the fact that because of the health system there basically being so weak at the baseline, it continues to be this emergency context, right, where it's this fine line between emergency and development.

But when we're not able to actually have continuity and training programs for the health care workers that are working in that setting, then hospitals reopen, people come in, people get

infected, we have new health care workers that are infected at the Monrovia medical unit that the U.S. Public Health Service is taking care of from reactivation of the health care system.

So the training is really important, and the continuity of players there is a big challenge, and this 21-day period really restricts the ability that have experience in this area or that are familiar with the context to basically be able to freely go back and forth to be able to share that expertise and really play a role in the field and domestically here.

DR. GUTMANN: Let me put out something that we as a Commission will need to say something about in regard to this. So we have taken a view of regulatory parsimony with regard to science and research. The analogous view with regard to imposing restrictive measures on health care workers or people exposed to a communicable disease is what you might call restrictive parsimony.

That is restrict people's freedom only to the extent that is necessary in order to protect other people from communicable diseases, simple principle which is hard to disagree with, right? So is it correct, accurate to say, with regard to people—with regard to Ebola, asymptomatic, it is not necessary to restrict the freedom of asymptomatic individuals and it's potentially counterproductive?

MS. HURLEY: And you touched on it a little bit when you were speaking, but my original talk, that's one of the things I was going to mention is that we as health care workers are very accountable. We don't want to spread Ebola to anyone in the United States, but inherent in our professions is some accountability.

And so yes, I monitored my temperature twice a day. Yes, I called the NIH about my temperature twice a day. Was I restricted? I came back at a time when those restrictions weren't

in place. So I think that you have to look at the inherent accountability in the health care profession and realize that that's probably not necessary.

DR. HENWOOD: I think the same. I mean, the colleagues that I spoke—

DR. GUTMANN: Trish. I'm going to call you all by your first name, and Patricia is Trish.

DR. HENWOOD: The colleagues that I spoke with that had come back, there was obviously only a few physicians working with the group that I was working with before, but they were probably more paranoid than the CDC would have been, right, at that point in time when there weren't restrictions, really monitoring themselves really closely, and we do.

We literally probably take our temperature more often than we need to if you feel the first sign of any twinge of a headache or something to that effect. So I think the idea is that if you're either participating yourself and monitoring or coordinating with the public health department in terms of monitoring, that's the point of monitoring, right? If you have symptoms, it's a different story. If you're asymptomatic, then there should not be—

DR. GUTMANN: So there's something there's a corollary to that, which is—

DR. HENWOOD: Yeah, asymptomatic.

DR. GUTMANN: There are restrictions that would say you must monitor your temperature and so on. Those are the but those are less restrictive than quarantine.

DR. HENWOOD: Right. Movement restrictions, I think, are different than monitoring. (Audio interference.)

DR. WAGNER: Can we just take that offline. We don't need that up here, and if the audience can hear from the other speaker, that would be fine.

DR. GUTMANN: Yeah.

DR. HENWOOD: Yeah, so I think that's the big difference. If you're doing monitoring, it's to determine if you have symptoms. If you don't have symptoms, then there shouldn't be a need for restrictive movement.

DR. GUTMANN: And you called in your comments, you called for being clear and specific about what's expected with regard to monitoring, but—

DR. HENWOOD: Right. For instance, I couldn't take the train

(Audio interference.)

DR. GUTMANN: Could you just is there a way of cutting that?

DR. WAGNER: Just eliminate that if you would.

DR. GUTMANN: Thank you. Okay.

DR. HENWOOD: I couldn't take the train, but I should take a taxi, but then it's rush hour and it would be very expensive to take a taxi from Dulles. So then it's okay to take a shuttle. But everything is a very open to interpretation, depends on the circumstances, and then I think that really means it's because you know that that's not a risk. If I was just evaluated by the CDC at the airport as I'm leaving, it should be reasonable that at that moment I would be safe to get on a train. I just had my temperature checked three times.

DR. GUTMANN: But at a time of the scarcity of health workers, to impose unnecessarily a 21 day quarantine which effectively puts them out of work is both, well, we said it's unnecessary, but it's also counter it's counterproductive. Jim wanted to say something.

DR. WAGNER: No, I just wanted quick one sentence summary. I think what I'm hearing and I just want this for our record is there might be three levels of vigilance. One is monitoring, one is quarantine, and the third is isolation. And at least for Ebola, when you told us that is transmitted only by bodily fluids, I understand the science would add it's transmitted only by

bodily fluids of a fully symptomatic patient. Consequently, for Ebola, we'd probably only be talking about monitoring and isolation, that quarantine is not necessarily an appropriate step, right?

DR. HENWOOD: And quarantine and isolation probably, I think, can be used interchangeably. It would more be it would be monitoring restricted movements and then quarantine.

DR. WAGNER: Make sure we're clear, because my understanding is actually quarantine is always of an asymptomatic person regardless of the illness.

DR. MICHAEL: And isolation would be for a positive.

DR. WAGNER: And isolation is for someone who is potentially contagious.

DR. HENWOOD: Right, but there's currently the middle zone of restricted movements that aren't quarantine, but are such that I can't take the train, I can't go to a restaurant, I can't go to a store, I can't go to a movie, I can't go anywhere there's a public gathering, which could be more than person.

DR. WAGNER: So you would for our purpose, you would urge that we use those kinds of travel restrictions as not a subcategory of quarantine, but as a separate category before one gets to quarantine?

DR. HENWOOD: Well, from my perspective, they wouldn't be necessary if you're monitoring and you're asymptomatic basically.

DR. WAGNER: Certainly not if I ask you the same questions about measles, you'd have different answers, right?

DR. HENWOOD: Because it's airborne.

DR. GUTMANN: Yes. But based on—

DR. WAGNER: And you can be contagious before you're symptomatic, whereas in Ebola, you cannot be contagious—

DR. HENWOOD: Right. For several days before you're symptomatic, and it's airborne, so it's a totally different ballgame.

DR. WAGNER: I think we're on the same page. Thank you.

DR. HENWOOD: Yeah.

DR. GUTMANN: Yeah, and the response by some highly educated, if you take the fact they have college degrees—people in this country with great political power has been totally inconsistent with regard to measles and Ebola, have actually flipped what the science—the indisputable science would require, right? I have many people, Nelson, done, Barbara is next.

DR. ATKINSON: I want to sort of continue this, the science part and the media part. Seema, I thought you did a great job. I actually saw you on CNN. But there was a lot of media that was not like yours, that was really very scare tactic. I mean it gets publicity to scare people more than it gets publicity to say it can't be passed that way. So I'm wondering a couple things, but one of them is how you get real science to people, especially people that start out with a skepticism about science to begin with, and I think that's part of the problem with all of this.

And then it leads to such false perceptions that you all had and that troubled you and leads to quarantine and things like that that don't make any sense. So I'm wondering if there's some way we could do a better job of the media in a broad sense, and I'm wondering whether social media or any of those kind of things might be a way to get better information out to a broader batch of people.

DR. YASMIN: Social media is hugely powerful, and we capitalized on that power by doing those live Twitter chats and just trying to get good information out there. Again, we just

couldn't overestimate how many times we'd have to repeat the basic facts. So even when you think, but I've said it 20 times and everybody must know, no, you assume that people don't know, that they're beginning from a place where they're really skeptical and they don't believe what you're saying. And so you just go back with the basic facts, and you just reiterate that as much as possible.

Another thing, though, that was really scary was that there was lots of media attention because we had a few cases in the U.S. We had an epidemic of fear, not a real epidemic. As soon as there were no active cases here, the media attention went away, and it was like, hello, there is still a huge epidemic continuing in West Africa. Can we talk about that?

DR. GUTMANN: To the credit of the Washington Post today, it's on the front page of the Washington Post that the challenge is getting Ebola cases to zero, and so again, I want to shout out the positives, because one of the things we find out from good social science is if all we do is dwell on how the challenges and how impossible it is, people become dug in to, you can't do anything about it. So I think it's the right question and a good answer.

I mean the media can make a huge positive difference by repeating over and over again in a clear and simple way not an inaccurate way that Ebola cannot be contracted except by the passage of bodily fluids and not from people who don't have symptoms. Trish.

DR. HENWOOD: I think the policies put in place also had an instantaneous effect. We had a ton of media coverage, and the instant that these restrictions came into place, everyone shot away, and I think that its very harmful in terms of advancing the end of the epidemic and then also people really having a sense of what happens and what goes on in a treatment unit and have otherwise this idea of this mythical deadly virus that is not possible to be treated and that

kind of thing. So I think it actually had a direct impact, some of these policies, on actually having media instantly vanish from the scene, and that affected the reporting on it.

DR. GUTMANN: Christine.

DR. GRADY: I think I have myself together now. I wanted to ask, it follows very much on this topic because it seems like part of the focus of this panel is how the policies affect communities in other places or within our own country, and there are two things that struck me from things that you said. One was the sort of ubiquity, if that's the right word, of myths of false information or misinformation or something like that. And I'm not sure how we deal with that with respect to policy.

So the idea that science should drive policies is, I think, critical. The idea that we have to keep repeating scientific facts, I think, is critical. But we also heard that sometimes there's scientific uncertainties. So how do we deal with uncertainty and myths and the impact of policy. So the 21 day policy made the journalists leave. The fact that we didn't restrict air flights made a positive impact in terms of policy.

So I'm just trying to sort of sort out the balance between controlling misinformation, thinking about health literacy or science literacy and the impact of policies and what we could do about any of that in our recommendations. And so it's sort of a huge amorphous question, but I think it's—

DR. GUTMANN: I think Seema.

DR. YASMIN: We saw the same thing during SARS. In Toronto, Chinese restaurants went out of business during the SARS epidemic. So we should have learned in 2001, 2002 that we can't do some of that communication during a time of public panic when people are so scared they're not absorbing accurate information. We have to keep doing it in the same way that we

have to be prepared for epidemics, we have to be prepared from that communication angle as well.

I mean the 21 day quarantine policy did have huge implications. I never thought I'd see a day when people would have bad things to say about doctors from Médecins Sans Frontières, Doctors Without Borders, I never thought I'd see that day. And then full disclosure, Kaci Hickox, the nurse who was quarantined in Newark, she was my colleague at CDC where we were both EIS officers around the same time, and it was kind of good that she was the first person to be quarantined under that policy, because she was great on media.

And she spoke directly to Governor Chris Christie. In fact, she was on MSNBC last night talking about him again and his comment about the measles vaccine. So it's really helpful to have people like that who can be clear, who can share accurate information and just get those messages out there.

DR. GUTMANN: Yeah, I wouldn't underestimate the importance of that. I mean when you began your comments, it was really interesting about media coverage. You said there are always some unknowns. And but journalists don't typically lead with, "There are some unknowns—if you get interviewed by a journalist and you say there are some unknowns, typically that's journalists don't want—in this case because there was this fear and the scientific evidence was overwhelming, instead of leading with the overwhelming scientific evidence, which was the equivalent of what Bill told us earlier with the polio vaccine, right? It's safe, it's potent, and it's efficacious. Right?

Instead of leading with that, which journalists—it's, "Well, there are people who are afraid that it's going to be contracted" instead of leading with the knowns. And the terrific thing about Kaci is she led with what the knowns were.

I think we have to, Christine, lead with in this case, you can't ignore human psychology here. We can't just say this is the science, and we're going to give it the way scientists read science, which people's eyes will glaze over. We have to begin with the knowns and state them very clearly, because they are potent, and if we ignore them, as we ignore them, lives are being lost.

The quarantine consequences were unfortunately intended by a lot of the people who put them forward, they intended they had one intention, which was to show the public that they would take any measures necessary to quell their fears, even if those measures sub rosa were not necessary. And now I think it is up to responsible people to call that out. Because quelling people's fears can be totally counterproductive if it's not based on what's needed and it's unethical.

And that unethical part is not our subtext, it's our text, but it's also important when there's no tension between what's productive and sometimes there are things there are ethical dilemmas which the productive and the ethical come into some tension. And this is a case where it does.

DR. WAGNER: Seema, please comment to follow that. We're being awfully harsh on the public at sometimes it seems to me because [Dr. Gutmann] you're more of a social scientist than I, but it does appear that most of us pay for our news, the news we receive out of our personal entertainment budget, our budgets for time, and our budget for dollars. And the need to capture an audience and to do business, I'd like to hear your perspective about the tensions of your personal mission, which you said was get the facts out and what you understood to be the mission of the medium from which you were trying to get the facts out.

DR. YASMIN: Sure. So there are editorial decisions made about what is the news and what isn't the news, and I have issues with that tagline on the front page of the New York Times, "All the news that's fit to print," while really it isn't. You decide what is the news and what isn't. And I just decided that it was a very powerful medium even though I am a writer. Television is powerful.

People will tune in in the millions, and this is a great opportunity to get that information out there. But there's only so much power you have in terms of saying, this is the story, we must talk about this. As I mentioned, once we didn't have any active cases here in the U.S. There was—it was quiet. There was no talk about Ebola. It moved onto the next thing.

And nowadays, I think especially television news falls prey to real time ratings. They can see instantly people are watching or people are tuning out, and they can change the story accordingly or stick to the story depending on how many people are watching.

DR. GUTMANN: That's the challenge, because it is a business, but it's a business that claims to be a profession, and it claims legal privileges for being a profession. For example, to protect its sources, journalists can protect their sources. If it is a profession as you say, it has to find ways of communicating the news accurately and also in a way that people want to listen.

Every profession has that challenge, because there's no profession, even religious professions, that don't have some need for a financial base to practice. But the profession requires—

DR. WAGNER: Even universities?

DR. GUTMANN: Even—definitely universities, but the profession requires a moral or ethical code if you will, and I think you're speaking to that. I'm open for, yes. Please, please.

MR. BAH: I just wanted to throw two things today, on, one, the need for accurate, scientific based information. I mean on the flip side, part of the challenge we had we continue to have in our countries as I've mentioned already is the lack of literacy, the fact that we only have about 25 percent, for example, radio penetration in these countries.

So having the right information to actually reach people and the fact that what Ebola required for our people is basically to change who they are, this is the way we express love. We touch each other. You take care of the sick. You take care of the dead. You prepare them for burial. And the way that it's it was portrayed sometimes in the media here, I mean I don't, it seems like a distant memory ago, but if you just go to YouTube and just Googled in September and October the media coverage here, it portrayed us as if we were we somehow had a predisposition to this virus.

It seems as if like if you're an African or if you're Sierra Leonean or Liberian or Guinean, that we're so primitive, we're so cave, that we had a disposition to this and that this was somehow because of who we are, that it was not a public health issue, it was not an electricity issue. So I mean your point about kind of like the ethics of it, when I was speaking to—two things have been said earlier today. One is that in some ways gave us this opportunity that we're having this discussion today, right? Because they overdramatized it in the U.S. I mean you can argue that, probably unnecessarily. I was on a panel with the New York City Health Commission, and she said for the one case that they had because they had the man was diagnosed the day after I arrived she said they had too much money and too many people dealing with this.

And this was in November. I had just come back from Sierra Leone. We were having 100 to 120 deaths a day in Sierra Leone. This was the peak. It was no longer any news, and we were

speaking to students at Columbia, and one of the students told me that hard luck that there was not more cases or more dramatization in your media here. He said because after the elections, it lost, and now kind of nobody really cares anymore.

So we're trying to figure out what's the—so I don't—I mean I was going to throw that to you as a question, right? I mean it's kind of like a dilemma here for me because in one case you say, well, this is what got people's attention in the first place, right? This is what creates this opportunity. But in the other case, right after they realized actually Dr. Brantly was well, the New York guy was well, the other guy was well, that's not really our problem. The elections were over.

You don't see it anywhere in November, and then it went underground, and again, I want to remind people, I want to remind whoever's listening, yesterday we had 21 cases in Sierra Leone, we still have schools that have been closed down for a year, people are dying still every day, but we're speaking about Ebola as if it's in the past tense. It's a big emergency going on today.

DR. GUTMANN: Well, I think you said it extremely well, and this is important for us to communicate.

Anita.

DR. ALLEN: So this takes us back to the media and also to Christine's observations that uncertainty and myth and fear and I would add lack of trust are major factors, and I want to talk about the trust issue with Chernor.

But on the media, so just this morning, I happened to turn on the television, and I don't know whether I turned on cable or network, but there was someone talking with medical authority about the myths surrounding measles vaccines. And the television network put on the

screen a big slide that listed all the myths. But the word "myth" was in small print way up on top, so all I could see was it causes autism, it poisons, it contains poison.

And the person in the background was saying the right things, but the public saw it causes autism, it contains poison. So just the design of the PowerPoint slide, right, undermined public health. And I think the media needs to be very careful about not just the words they say, but the graphics they use, and the all the externals. It was a small thing, but I thought this is a major mistake on the part of this particular broadcast.

DR. YASMIN: The same happens anytime I now write a story about measles or do a health video or something. The picture that automatically gets tacked with it is a baby who's screaming while getting their vaccine. It's like can we just move away from that? But there is this false idea that we have to have these balanced stories. We've done away with that for climate change.

Why are we still having vaccine deniers, some of them physicians apparently, on the news saying that they think the MMR causes autism, so that this idea that we have to have the people that are for and against. Well, actually, not always, no, the anti-science, we don't have to have that.

DR. GUTMANN: Could you all watch The Daily Show with Jon Stewart? He has done better to skewer, to absolutely skewer, to ridicule in a most effective way the idea that every story has two equally balanced sides. And I think most journalists are, I know most journalists are smart enough to get that if they really want to do the right thing, and there aren't two sides to the measles, is the measles vaccine effective.

DR. ALLEN: And if I could just finish my—

DR. GUTMANN: Please.

DR. ALLEN: Thank you. I mean because I could just finish my point, because I want to then move to Chernor and ask him about the aftermath of the conspiracy theory, right? Because I was amazed to hear you say that the educated people, the doctors, the lawyers, the business people, they also believe that there was some kind of conspiracy, and they believe because they were hearing through the internet media that Americans were conducting research that was or somebody was conducting research that was deliberately exposing people to Ebola.

So where is that debate now? Is the debate gone? Has the experience shown that that was ridiculous? Are people still, because of the mistrust we all understand the sources of, going back to colonialism and slavery and all that good stuff, has that now been erased? Are people now moving beyond the conspiracy theory in your country?

MR. BAH: That's a really good question, because I just came back last month, and I am particularly interested in that subject. I was going to say the thing that makes conspiracy theories thrive is their specificity. They say there was a Tulane University lab that was in Kenema that had a mistake or something. That is why it started. And then you have, again believe me, I'm fascinated. Where do these people come from? Who are these people?

I've joined all these WhatsApp groups in Sierra Leone, and they share these messages. You have people that speak with American accents, like internet hosts. There was a lady whose video was ubiquitous for some reason. She's like a far right, religious somebody somewhere in Texas—I'm sorry—and who basically was just saying about all these things, and everybody got these videos for some reason. We were trying to work with locals to create the right messages going out there.

And then the next set of messages, the next set of controversy theories was that of course they were holding the medicines or trying to reduce our population, but that the Americans are

all kind of healed. And somehow the evidence reinforced that, right? Because all the American doctors recovered. All the Sierra Leonean doctors died. All the Sierra Leonean doctors, even the one that was brought to the United States, I mean of course we know that they brought him too late and all that, but then he also died.

And then all the Americans that were brought—and now the we have had one Sierra Leonean doctor who survived, and I talked to my other friend who has doctor colleagues, and they say he didn't even really have Ebola. It was not Ebola. They said if he really had Ebola, he would have died. They think that if somebody survives, it's malaria, it was just mistaken, but that Ebola could—again, it's just how people can contain two contrasting information in their head.

I find that also really fascinating as a public education person. They can have one information that says, yeah, all these people, they're killing us, we need the vaccine. But at the same time, they don't believe that anybody gets well. But I think the good thing is we have passed the stage of denial. I was in Port Loko in a public meeting and I asked everybody, "Who does not believe that there's Ebola," when it was then, October. A lot of people would say, we don't think there's Ebola." It's kind of like something—they think they got infected when they put them in the ambulance. That's why people were afraid to get into the ambulance. That's what was undermining them going into the hospital in the first place. Because think about it, you're uneducated, somebody comes to your house wearing all of these things, you don't even see their face. They take your loved one, and they go to the hospital.

Of course, most of them died on the way to the hospital because it was like at the last stage of the disease, that's when we actually sought help. And so they thought what killed them was the ambulance. So the ambulance was stigmatized. They hear that sound, they're like that's

where they're going to kill me. I talked to a lot of survivors who told me that. But we've crossed that stage. We've crossed the stage of the fear, of the absolute denial.

Where we are now is people still think this was some somebody was trying to eliminate us or somebody's mistake and that the government was in collusion. So it kind of perpetrates distrust that the government was corrupt, they paid them to do a test that went wrong, and there's definitely that undercurrent still.

DR. GUTMANN: Last question, John. Oh, Patricia. I'm sorry.

DR. HENWOOD: Just to underscore that, I think the messaging locally was such a huge thing. I was actually running our ambulance service in Liberia, and so I was going out to the villages to actually work with the contact tracers and case investigators from the county to bring people in, so really getting the frontline perspective in terms of is Ebola real and watching that shift over time in terms of—I think something that has helped the efficacy of the response in Liberia is really the messaging and the messaging from the government. And I was on the road all day in our ambulances and the radio all day was messaging about Ebola. That's the only thing that was on the radio, messaging from UNMIL, signs all over. And so I think that that penetration of those messages initially it was the same thing people were saying that the wells were being poisoned and you could go on and on and on in terms of the number of myths of what things were coming from, but I think the messaging locally is what made such a big difference and has actually contributed to cases being lower in Liberia at this point in time in terms of the awareness.

MR. BAH: (Off mic.)

DR. HENWOOD: Exactly, and—

MR. BAH: (Off mic.)

DR. HENWOOD: And having people understand that the ETU wasn't some place that people go to die, but actually people walk out of.

DR. GUTMANN: John.

DR. ARRAS: Thank you. As a former resident of Moyamba, Sierra Leone, this has been a heartbreaking spectacle. I wonder about all my friends. So thank you all for what you do.

A couple of things stand out for me from this conversation. One of them is really the hollowing out of the health care cadre in these countries. We're talking about, what, eight surgeons left in Sierra Leone. Most of them are elderly now. I'm sure it's the same sort of situation in Liberia and Guinea.

And then there was the remark I think you [Mr. Bah] quoted the president [of Sierra Leone] as saying that this catastrophe has caught the country with its pants down. So going forward, I'm wondering what developed countries like the United States can do or should do to help not just to develop vaccines and treatments, okay, working on stuff in the labs, but also to maybe go to the University of Freetown and develop the seeds of a real public health infrastructure, which I gather didn't exist. I mean, my impression is that the armies in these countries are much better funded than the health care systems. And what can we do to help change that? That's the question.

MR. BAH: Wow. Do you speak any Mende still from your time in Moyamba?

DR. ARRAS: Yeah, I do, yeah. A little bit. Yeah, I still speak a little bit of Mende, and a little bit of Krio.

MR. BAH: Okay, awesome. We'll talk about that afterwards.

DR. ARRAS: Good. Okay.

MR. BAH: I mean I'm an advocate for education, so my obvious answer, but which I think is actually the right answer, is an investment in education. I think we still have too many kids out of school in these countries, and I think you have to think long term. We've talked here before about how you have to begin to plan before the emergency actually starts, and girls' education, it's a big problem. Too many girls drop out of school in these countries. I think if you invest in education, invest in building up and Ebola actually, again, big opportunity. Before the outbreak we had very few ambulances in Sierra Leone. People didn't even know about—a Sierra Leonean, when they got sick, nobody thought about calling an ambulance. This is a very foreign concept. This time when I went last month, I met with the ambulance drivers, and he was saying to me, I said, "How is it going?" He said, "Well, the cases have reduced, but everybody now, even if their head is scratching, they call the ambulance." And I was like, wow. I mean he was complaining.

DR. GUTMANN: Trish, said just like the United States.

MR. BAH: Yeah, I know. I was like, well, that's a good—but what we fear is your attention span, the western attention span is going to relapse. Those ambulances are obviously very soon going to—when they are done, there's not going to be replaced. There's not going to be a system to try to build especially in Liberia where the military is coming back now and Sierra Leone.

And I think what you really need is an investment in human capital, is an investment in education and in health and in long term thinking. And until we can do that, cholera next time or one of the other many neglected tropical diseases will continue to hunt us down.

DR. GUTMANN: And that's a very strong and global thing to say even if we believe as I believe that all of that is not going to be forthcoming, if some of it's forthcoming, that is so much

better than nothing. I mean anything that can be done to learn from this, that we have to stick to investing—as accepted in partnership with countries—in education and infrastructure and public health, will save lives.

So with that, I just will say on behalf of the whole Commission we can't thank you enough, but we will end this session by thanking you so very much for your presentations and for the work that you have done for the better and to help us in the past and now moving forward with an ongoing crisis. Thank you.

(Applause.)